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In Cooperation with State and Federal Agencies

COTTON INSECT CONDITIONS FOR WEEK ENDING JUNE 23, 1945

(Ninth Cotton Insect Survey Report for 1945)

The boll weevil situation continues critical. In some areas hot, dry weather has reduced the weevils and in other areas conditions have been favorable for them. In most areas there are sufficient weevils to cause serious damage during July unless checked by hot, dry weather or the use of calcium arsenate. There is much late cotton which increases the danger of boll weevil damage.

The prospect of serious flea hopper damage becomes less each week.

The first cotton leafworms this year came from Matamoros, Mexico on June 22, and San Benito, Texas on June 23. Although the first appearance of leafworms is later than for many years, those found were full grown and there is still plenty of time for the leafworms to cause trouble.

Grasshoppers are abundant in many localities in the western half of the cotton belt and some poisoned bait is being used to protect cotton.

Cotton growers, especially in Texas, should be on the lookout for the bollworm.

The only reports of insecticide shortages for cotton have been for nicotine and this situation seems to be improving.

BOLL WEEVIL

TEXAS: Weevils are still emerging from hibernation cages at Waco. The total emergence to June 23 was 5.12% which is much higher than any recent year except 1941.

Square examinations in 349 fields in 40 counties averaged 37% infestation, an increase of 4% during the week. Two percent of the fields examined were not infested; less than 10% of the squares were punctured in 23% of the fields; from 11 to 25% were infested in 25% of the fields; from 26 to 50% were infested in 18% of the fields; and more than 50% were infested in 32% of the fields. The infestation in 5 southernmost counties where squares are becoming scarce averaged 72%; in 26 coastal and south central counties 25%; in 4 northeastern counties 10%; and in 5 counties in the Blacklands area 31%. Insecticides were being used in only 12 of the fields examined.

Plant examinations in 104 fields of seedling cotton in 18 northern and north central counties averaged 105 weevils per acre.

Cotton made excellent growth and is fruiting heavily from the coastal to north central counties except in spotted areas that are too wet. Drought continues in the Lower Valley and northwestern plains area where large acreages of cotton are still unplanted.

OKLAHOMA: Cotton still too small for square examinations. Boll weevils continue to emerge from hibernation and are very numerous in fields as far west and north as Caddo County. Plant examinations in 253 fields in 24 counties in the south and south central portion of the state averaged about 150 weevils per acre. Highest populations were in McCurtain County with 2920 weevils per acre in one field and a county average of 980 weevils in 16 fields.

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LOUISIANA: Conditions favorable in many localities in northern Louisiana for chopping, hoeing and cultivation of cotton. Cotton varies from seedling to blooming stages. Conditions have been favorable for weevils during the past two weeks. Some poisoning with calcium arsenate reported in St. Landry Parish.

In examination of 241 cotton fields throughout the state the average infestation was 8% punctured squares with no weevils found in 42% of the fields; an average of less than 10% punctured squares in 37% of the fields; between 10 and 25% punctured squares in 10% of the fields; between 25 and 50% in 7% of the fields; and over 50% infestation in only 4% of the fields.

The highest temperature at Tallulah during the week was 90° F. and 8.39 inches of rain fell between June 11 and 19. The second generation of weevils should appear July 10-15 and present indications are insecticides will be needed in many fields by that time.

ARKANSAS: Much cotton has not reached the squaring stage but varies in size from seedling to blooming stages in southern part of the state. Weather favorable in many localities for chopping, hoeing and cultivation of cotton, and also favorable for boll weevils.

MISSISSIPPI: Examinations of 271 fields in 42 counties in all sections of the state showed weevils present in 146 fields. In 85 of these fields the average square infestation was 11% punctured squares and in 61 fields of small cotton weevils were found on plants at the average rate of 152 per acre. Weather conditions were favorable for checking the weevils in South Mississippi. Square infestations in 12 fields in 6 southern counties averaged less than 7% but ran as high as 68% punctured squares in one field in Clarke County in the east central section and 67% in a field in Warren County in the west central section of the state.

Moderate temperatures prevailed in the Delta with excessive rains in the southern Delta counties. Weevils were found in 84 of the 172 Delta fields examined. In 60 of these fields the square infestation averaged 11%; and in 24 fields of seedling cotton from 50 to 550 weevils, or an average of 125 per acre, were present. The infestation in the Delta counties averaged the same as on this date last year, but cotton is 10 to 14 days later this year.

ALABAMA: W. A. Ruffin, Extension Entomologist, wrote on June 22: "Rain was reported fairly general over South Alabama. Some spots are still dry. On 43 fields examined, infestation ranged from two per cent to as high as 54 per cent, with an average on all fields examined of 14 per cent. We are now advising farmers to start poisoning cotton in this area. Some fields have received as much as three applications of calcium arsenate to date. My observations were that cotton that was dusted early in the season was heavily infested with aphids."

GEORGIA: Boll weevils were found in each of the 35 fields examined in 15 counties in southern Georgia. The infestations varied from 1% punctured squares in a field in Dougherty County to over 60% in fields in Dooly County and Effingham County. Two-thirds of the fields examined had 10% or more of the squares infested.

SOUTH CAROLINA: The weather was sufficiently hot and dry during the week to retard weevil development. Cotton is well cultivated and made good growth but rains are badly needed in the eastern and central sections of the state. Weevils continue to emerge from hibernation cages at Florence and the emergence to date is 1.65%, which is considerably higher than in 1944, 1943 and 1942.

Sixty weevils were also removed from the 1/5-acre trap plot this week, making a total of 536 weevils through June 23, four times as many as in 1944, about the same as in 1943 and 1942, and about half as many as in 1941.

Square examinations in 208 fields in 28 counties averaged 13.7% as compared to 17.8% last week. One percent of the fields were not infested; in 30% of the fields the infestation was below 10%; in 47% between 10 and 25% infestation; and in 22% over 25% infestation.

Plant examinations in 106 fields of seedling cotton in 18 Piedmont and western counties averaged 151 weevils per acre, or about the same as last week.

NORTH CAROLINA: Much-needed rains improved cotton conditions, although scattered damage from hail occurred in some counties. Fields are well cultivated but stands are poor and in some instances have been plowed up and replanted to corn or peanuts. Weevils continue scarce and were found in only 25 of the 95 fields where examinations were made in Beaufort, Craven, Edgecombe, Franklin, Greene, Jones, Lenoir, Nash, Pitt, and Wilson Counties. No infested fields were found that had as many as 10% of the squares infested and the average was only about 1%.

COTTON FLEA HOPPER

TEXAS: Very little change occurred in flea hopper populations and damage continues comparatively light in all areas. Cotton is fruiting normally in the coastal area where heavy flea hopper damage often occurs.

In 423 fields examined in 56 counties the average population was 7.7 flea hoppers per 100 terminal buds. No flea hoppers were found in 31% of the fields; less than 10 per 100 terminals in 46% of the fields; more than 10 in 23% of the fields. Insecticides were being used in only 10 fields.

OKLAHOMA: Flea hoppers were generally distributed but were present in very small numbers. In 215 fields examined in 21 counties the average population was 1.2 hoppers per 100 terminal buds. The highest populations were 10 per 100 buds in Marshall County; 8 in Caddo; 7 in Carter; and 6 in Garvin County.

OTHER PLANT BUGS

Salt River Valley, Ariz. Cotton is making good progress and a few blooms are appearing on earlier planted fields. Lygus bugs are still much more numerous on alfalfa than last year and are increasing on cotton. Populations averaged 25 to 35 per 100 sweeps on stub cotton and 4 to 8 on plant cotton. Very few insects are present on late cotton.

Santa Cruz Valley, Ariz. Lygus and other plant bugs are nearly twice as abundant on weeds as at this time last year but populations are still low on cotton, averaging about 2 per 100 net strokes.

San Joaquin Valley, Calif. Lygus populations are relatively high and there is considerable shedding of minute squares. Five percent of the larger squares show Lygus injury. (Dr. J. H. Frietag, Calif. Expt. Sta.)

The tarnished and rapid plant bugs are more abundant than usual and are causing damage in the Mississippi-Louisiana Delta.

MISCELLANEOUS INSECTS

Grasshoppers continue to damage cotton in the San Joaquin Valley of California. Guayule fields appear to be the principal source of hopper infestations. Poisoned bait is being used but in guayule fields receiving a

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minimum of irrigation the bait dries quickly and the hoppers do not take it readily. (Geo. J. Harrison, Bur. Plant Industry).

In Texas and Oklahoma grasshoppers are also causing more than normal damage to cotton in many counties. Some difficulty in obtaining poison bait has been reported.

Yellow-striped armyworms in Kings County, California continue unabated and considerable damage has been done to cotton.

Aphid populations are decreasing somewhat. Heavy populations have been reported from a few fields in Texas and Alabama but in most areas only small quantities of arsenicals have been used and natural enemies have prevented serious infestations from developing.

Bollworm: In hibernation cages at Waco, Texas, 45% of the bollworm moths have emerged this spring--a higher survival than during any recent year. Bollworms were noted in 50 fields in 22 Texas counties where boll weevil and flea hopper infestation counts were made.

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